

PHOTOVOLTAICS ON INDIAN LANDS

The SOLAR WAY



Sandia
National
Laboratories

ACKNOWLEDGEMENTS

The authors express their heartfelt thanks to the many tribes across the United States who use solar electricity to meet their numerous and varied needs, and who generously gave their time and energy in this shared vision. Thanks go also to the U.S. Department of Energy, Office of Power Technologies, for the support that made publication of **The Solar Way** possible, and for the support given in numerous ways to promote the successful use of PV on Indian lands.

Michael G. Thomas
Connie Brooks

Sandia National Laboratories
Photovoltaics Program

Gabriela Cisneros

New Mexico State University
Southwest Technology Development Institute

COVER PHOTO

Rock formation, Narbona Pass, Chuska Mountain Range, Navajo Nation, New Mexico. Since childhood, Paul Denetclaw of the Navajo Nation has wondered when the small rock cradled at the top of the red bluff might fall. Now his children watch.

The cover photo was chosen to symbolize what endures: the sun, power from the sun, the earth, and things on it.
(Photo courtesy Roger Hill, Sandia National Laboratories)

SAND 2001-3863P

Copyright 2001, Sandia Corporation
All rights reserved



CONTENTS

The Solar Way is intended to help tribes make informed decisions about photovoltaics and help PV customers make informed decisions about how to use their systems to the fullest benefit for the longest period of time. PV is a form of “distributed energy resource,” a power source close to the end user rather than generated at a central station and transmitted miles across power lines. PV is, therefore, very well suited to play a large role in creating needed electricity on tribal lands.

The First Americans, Cultural Traditions, and The Solar Way	2
Learning the Ways	4
Preserving the Old Ways	8
Enduring Seeds – Sustainable Agriculture	14
Caring for Earth Mother	18
Caring for the People	22
An Energy Vision	26
Choosing Well – Quality of Life	32
Toward Economic Independence.	38
The Power of Choice	44
Ensuring System Success	50
The Power of the Sun	54
Contacts.	55
Index	59

THE FIRST AMERICANS, AND THE SOLAR WAY

CULTURAL TRADITIONS,

There are more than 500 tribes of American Indians and Alaskan Natives living in the United States, on and off reservation lands that range in size from only a few city blocks to millions of square miles of rural lands. It would be a mistake to presume that all tribes are the same or that all their needs are the same.

But with all their diversity, they cherish some common values: caring for the earth and the people on it, caring about future generations, and living as sovereign people, for Seven Generations to come. Within the pages of **The Solar Way** we have tried to present the Seven Generations philosophy, and show how photovoltaics is in harmony with that philosophy.

Simply put, PV captures the sun's energy to generate electricity. It can be used anywhere the sun shines to generate electricity cleanly and quietly and independently – no noxious fumes, no obtrusive power lines. Solar electricity is an enabling technology. It enables tribes to install the power they need for preserving traditions, encouraging sovereignty, maintaining independence, creating jobs, choosing lifestyles, and caring for the earth and her people – for Seven Generations to come.

